AMENDMENTS TO THE CLAIMS

Upon entry of this amendment, the following listing of claims will replace all prior versions and listings of claims in the pending application.

IN THE CLAIMS

Please amend claims 1, 2, 3, 7, 8, 11, 14, 16, 17, 18, 19, 20 and 21, cancel claims 22 and 23, and add claims 24 and 25 as follows:

1. (Currently Amended) A method for enabling strong mutual authentication on a computer network comprising the steps of:

transmitting, by a first computer, a first encrypted message to a second computer over a first communication channel, said first encrypted message comprising a first authentication number encrypted with a second authentication number; ~~and~~

transmitting, by a verifier ~~said first computer~~, a second message to said second computer over a second communication channel, wherein said second message comprises a second authentication number used to decrypt said first encrypted message[[.]] and;

receiving, by said first computer, from said second computer a third encrypted message over said first communication channel, said third encrypted message comprising said second authentication number encrypted with said first authentication number; and

determining, by said first computer, said second authentication number of said third encrypted message is the same as said second authentication number used to encrypt said first encrypted message.

2. (Currently Amended) The method of claim 1, authenticating, by said first computer, the second computer in response to said determination. ~~wherein said first message comprises a first authentication number.~~

3. (Currently Amended) The method of claim 1~~2~~, comprising decrypting, by said second computer, said first encrypted message using said second authentication number of the second message. ~~wherein said first authentication number is encrypted by said second authentication number~~.

4. (Original) The method of claim 1 further comprising transmitting a first indicia to said first computer over said first communication channel.

5. (Currently Amended) The method of claim 2 ~~1~~ further comprising generating, by said first computer, at least one of said first authentication number ~~and~~ or said second authentication number.

6. (Original) The method of claim 1 further comprising generating, by said first computer, a third authentication number.

7. (Currently Amended) The method of claim 1 further comprising transmitting, by said first computer, said second message to ~~a~~ said verifier over ~~said second~~ a third communication channel and transmitting by said verifier said second message to said second computer over said second communication channel, wherein said second message comprises said second authentication number encrypted.

8. (Currently Amended) The method of claim 1, comprising generating, by said second computer, said third encrypted message by encrypting said second authentication number of said second message from said verifier with said first authentication number of said first encrypted message from said first computer. ~~wherein said second communication channel further comprises a third communication channel~~.

9. (Original) The method of claim 1, wherein said second message further comprises a third authentication number.

10. (Original) The method of claim 7 further comprising decrypting, by said verifier, said second message to obtain a first decrypted message, wherein said first decrypted message comprises said second authentication number.

11. (Currently Amended) The method of claim 7, wherein said verifier comprises one of a third computer, a mobile communications device or a subscriber identification module. ~~transmitting said second message to said second computer over said second communication channel further comprises transmitting, by said verifier, said second authentication number to said second computer over said second communication channel~~.

12. (Currently Amended) The method of claim 2 ~~1~~ further comprising decrypting, by said second computer, said first message transmitted by said first computer to recover said first authentication number.

13. (Original) The method of claim 1 further comprising transmitting, by said second computer, a third message to said first computer over said first communication channel,

wherein said third message comprises said second authentication number encrypted by said first authentication number.

14. (Currently Amended) The method of claim 13 ~~1~~ further comprising validating said second computer by said first computer by decrypting said third message to obtain said second authentication number.

15. (Original) The method of claim 1, wherein said second message further comprises an encrypted portion.

16. (Currently Amended) A system for enabling strong mutual authentication comprising:

a first computer transmitting a first encrypted message over a first communication channel to a second computer, said first encrypted message comprising a first authentication number encrypted with a second authentication number; ~~and~~

a verifier transmitting a second message to said second computer over a second communication channel, said second message comprising a second authentication number used to decrypt said first encrypted message; and

wherein said first computer receives from said second computer over said first communication channel a third encrypted message comprising said second authentication number encrypted with said first authentication number, and determines said second authentication number of said third encrypted message is the same as said second authentication number used to encrypt said first encrypted message.

~~a first transmitter; and~~

~~a first receiver in communication with said first transmitter over a first communication channel and in communication with said first transmitter over a second communication channel;~~

~~wherein said first transmitter transmits a first encrypted message to said first receiver over said first communication channel; and~~

~~wherein said first transmitter transmits a second message to said first receiver over said second communication channel, sdaid~~ said ~~second message used to decrypt said first encrypted message.~~

17. (Currently Amended) The system of claim 16 wherein said first computer authenticates said second computer in response to said determination. ~~further comprising:~~

~~a second transmitter; and~~

~~a second receiver in communication with said second transmitter over said first communication channel;~~

~~wherein said second transmitter transmits a first indicia to said second receiver over said first communication channel,~~

~~wherein said second transmitter transmits a third message to said second receiver over~~

~~said first communication channel, said third message comprising at least a portion of said decrypted first encrypted message.~~

18. (Currently Amended) The system of claim 16 ~~17~~ wherein said second computer decrypts said first encrypted message using said second authentication number of the second message. ~~further comprising a comparator in communication with said first transmitter and said second receiver to compare at least a portion of said third message with at least a portion of said decrypted first encrypted message~~.

19. (Currently Amended) The system of claim 16, wherein said verifier comprises one of a third computer, a mobile communications device or a subscriber identification module. ~~said second message is encrypted~~.

20. (Currently Amended) The system of claim ~~19~~16 wherein said first computer transmits to said verifier said second message encrypted and said verifier ~~further comprising a verifier in communication with said first transmitter to~~ decrypts said encrypted second message to obtain a key to decrypt said first encrypted message.

21. (Currently Amended) An apparatus for enabling strong mutual authentication on a computer network comprising:

means for transmitting, by a first computer, a first encrypted message to a second computer over a first communication channel, said first encrypted message comprising a first authentication number encrypted with a second authentication number; ~~and~~

means for transmitting, by a verifier, a second message to said second computer over a second communication channel, wherein said second message comprises a second authentication number used to decrypt said first encrypted message;

means for receiving, by said first computer, from said second computer a third encrypted message over said first communication channel, said third encrypted message comprising said second authentication number encrypted with said first authentication number; and

means for determining, by said first computer, said second authentication number of said third encrypted message is the same as the second authentication number used to encrypt said first encrypted message.

~~means for transmitting a first message to a computer over a first communication channel, wherein said first message comprises a first encrypted authentication number; and~~

~~means for transmitting a second message to said computer over a second communication channel, wherein said second message comprises a second authentication number used to decrypt said first message.~~

22. (Canceled)

23. (Canceled)

24. (New) The method of claim 1, comprising determining, by said first computer, said second authentication number of said third encrypted message is not the same as said second authentication number used to encrypt said first encrypted message.

25. (New) The method of claim 24, comprising not authenticating, by said first computer, the second computer in response to said determination.